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FIRST RECORD OF *ALUTERUS SCRIPTUS* AND *ALUTERUS MONOCEROS* (PISCES, TETRAODONTIFORMES, MONACANTHIDAE) FROM THE ARCHIPELAGOES OF MADEIRA AND SELVAGENS (NE ATLANTIC)*

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With 2 figures and 2 tables

SUMMARY. The scrawled filefish *Aluterus scriptus* (Osbeck, 1765) and the unicorn leatherjacket *Aluterus monoceros* (Linnaeus, 1758) were recorded for the first time from the Archipelago of Madeira. The former was also the first record from the Selvagens Islands. Data on the biometry and meristics of these two species are given. These records not only enlarge the previously known area of distribution of these species, but also represent the first record of *A. scriptus* from the northeastern Atlantic Ocean.

KEY WORDS: Pisces, Tetraodontiformes, Monacanthidae, *Aluterus scriptus*, *Aluterus monoceros*, Madeira, NE Atlantic Ocean.

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RESUMO. No presente trabalho *Aluterus scriptus* (Osbeck, 1765) e *Aluterus monoceros* (Linnaeus, 1758) são assinalados pela primeira vez para o arquipélago da Madeira, sendo que a primeira espécie é também assinalada pela primeira vez para as Ilhas Selvagens. São fornecidos dados merísticos e biométricos de ambas as espécies. Estes registos não só alargam a área de distribuição conhecida das duas espécies como também representam o primeiro assinalamento de *A. scriptus*, para o Oceano Atlântico nordeste.

PALAVRAS CHAVE: Peixes, Tetraodontiformes, Monacanthidae, *Aluterus scriptus*, *Aluterus monoceros*, Madeira, NE Oceano Atlântico.

INTRODUCTION

The family Monacanthidae has ca. 95 described species (NELSON, 1984), two of which, *Stephanolepis hispidus* (Linnaeus, 1766) and *Aluterus monoceros* (Linnaeus, 1758), occur in northeast Atlantic (TORTONESE, 1986; QUÉRO & LABORDE, 1996), the latter being rarer than the former. In the waters of the archipelago of Madeira, this family was, until now, represented only by *S. hispidus* (Günther, 1870).

The genus *Aluterus* is represented in the Atlantic Ocean by four species distributed mainly in the tropical regions; *Aluterus scriptus* (Osbeck, 1765) and *A. monoceros* (Linnaeus, 1758), tropical and subtropical areas in the Pacific, Indian and Atlantic Oceans (HUTCHINS, 1986; HARMELIN-VIVIEN & QUÉRO, 1990); *A. heudelotii* Hollard, 1855, tropical areas of both sides of the Atlantic Ocean (HARMELIN-VIVIEN & QUÉRO, 1990) and *A. schoepfii* (Walbaum, 1792), tropical region of the eastern Atlantic and western Atlantic from Nova Scotia to Brazil (HARMELIN-VIVIEN & QUÉRO, 1990).

The specimens of *Aluterus* reported herein are all deposited in the collections of the Museu Municipal do Funchal (História Natural) (MMF). Measurements were taken according to BERRY & VOGELE (1961).

Aluterus scriptus (Osbeck, 1765) (Fig. 1)

Material examined: MMF 22906, male, SL. 450 mm, 13.11.1970, caught alive in shallow water inside Funchal harbour. Lived in the Funchal Aquarium for 48 hours; MMF 31360, female, SL. 371 mm, 21.11.1999, Bay of Funchal, caught alive at 2.5 m of depth near shore, in a shadow area of the rock wall of the Carlton Hotel swimming pool; MMF 32754, female, SL. 477 mm, 21.03.2001, Selvagens Islands (30º 09' N; 15º 52' W), caught alive at shallow water near shore.

Counts and measurements of the Madeiran specimens agree well with the ones given by BERRY & VOGELE (1961) (Table 1) for specimens from the western North Atlantic. However, our specimens show a body depth slightly higher (35.1 – 37.5% SL *vs*

21.5 – 35% SL) and an eye diameter slightly smaller (4.0 – 4.6% SL *vs* 5.3 – 9.1% SL) than the specimens from the western North Atlantic.

In the Atlantic Ocean, *Aluterus scriptus* has been recorded from: Nova Scotia, Canada and the northern Gulf of Mexico to Brazil (ROBINS & RAY, 1986), Canary Islands (RICHARDSON, 1844), Morocco (BLOCH, 1795), Cape Verde (GÜNTHER, 1870), São Tomé Island (AFONSO *et al.*, 1999), Ascension Island (GÜNTHER, 1880) and South Africa (PENRITH, 1976). This is the first time this species is reported from Madeira and the Selvagens islands and the present records represent the northernmost ones in the eastern Atlantic, extending the previously known northern limit by 240 nautical miles.

TABLE 1 - Biometric and meristic characters of *Aluterus scriptus* recorded from Madeira with a comparison with data given by BERRY & VOGELE (1961) from western North Atlantic specimens (measurements in millimeters).

	Berry & Vogele (1961) Western North Atlantic	MMF specimens
Nº specimens	48	3
Standard length (SL)	27 – 377	371 – 477
Depth of Body (% SL)	21.5 – 35	35.1 – 37.5
Head length (% SL)	29.3 – 33.9	30.2 – 33.4
Snout length (% SL)	21.9 – 28.8	27.1 – 28.3
Eye diameter (% SL)	5.3 – 9.1	4.0 – 4.6
Eye to spine (% SL)	5.0 – 6.7	4.9 – 5.1
Caudal fin length (% SL)	33 – 61	31.4 – 35.6
Caudal peduncle length into peduncle depth	1.24 – 1.60 (SL >50 mm)	1.23 – 1.41
Dorsal soft rays	43 – 49	44 – 48
Anal soft rays	46 – 52	49
Pectoral soft rays	13 – 15	14

***Aluterus monoceros* (Linnaeus, 1758)** (Fig. 2)

Material examined: MMF 26618, female, SL. 413 mm, August, 1995, Porto Santo, caught with line and hook at the harbour.

Counts and measurements of the Madeiran specimens agree well with the ones given by BERRY & VOGELE (1961) for specimens from the western North Atlantic, as well as with data given by QUÉRO & LABORDE (1996) and GALEOTE *et al.* (1996), for specimens from the northeastern Atlantic (Table 2). It is worth noting that the eye diameter tends to be larger in the eastern Atlantic specimens (4.6 – 5.1% SL *vs* 3.8 – 4.2% SL) and the caudal fin length smaller (16.2 – 16.7% SL *vs* 18.0 – 26.6% SL) (Table 2). Moreover, the Madeiran specimen has one more pectoral fin ray (15 rays in both fins) than the reported in the literature for the species.

TABLE 2 - Biometric and meristic characters of *Aluterus monoceros* recorded from Madeira with a comparison with data given by other authors (measurements in millimeters).

	Berry & Vogele (1961) Western North Atlantic	Quéro & Laborde (1996) Eastern North Atlantic (Bay of Biscay)	Galeote *et al.* (1996) Eastern North Atlantic (Cadiz)	MMF specimen
Nº specimens	10	1	1	1
Standard length (SL)	53 – 545	450	391	413
Depth of Body (%SL)	34.4 – 43.8	35.0	34.5	34.6
Head length (%SL)	26.6 – 34.7	26.7	28.6	27.1
Snout length (%SL)	23.4 – 27.5	24.0	25.3	24.9
Eye diameter (%SL)	3.8 – 4.2	4.7	4.6	5.1
Eye to spine (%SL)	7 – 8.6	6.8	6.1	6.8
Caudal fin length (%SL)	18.0 – 26.6	16.7	16.3	16.2
Caudal peduncle length into peduncle depth	0.65 – 0.95	0.55	0.70	0.57
Dorsal soft rays	II + 46 – 50	II + 49	II + 46	II + 47
Anal soft rays	47 – 52	51	49	48
Pectoral soft rays	14	14	14	15

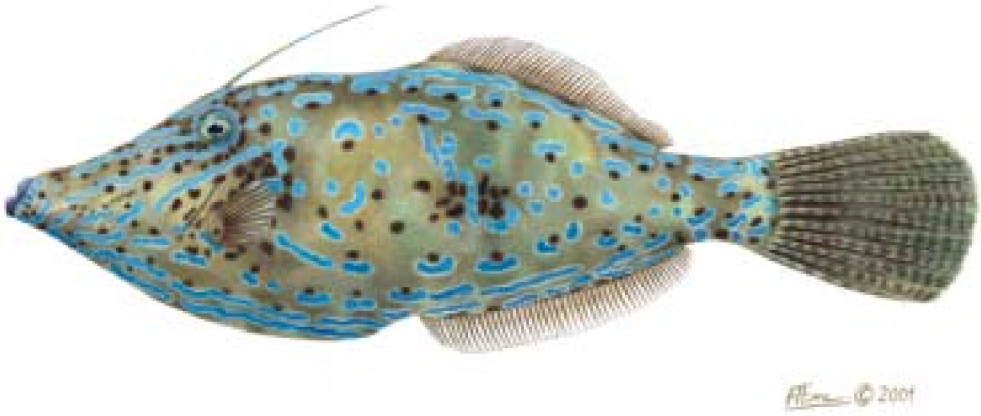

Fig. 1 - *Aluterus scriptus* (Osbeck, 1765). MMF 22906, SL. 450 mm.

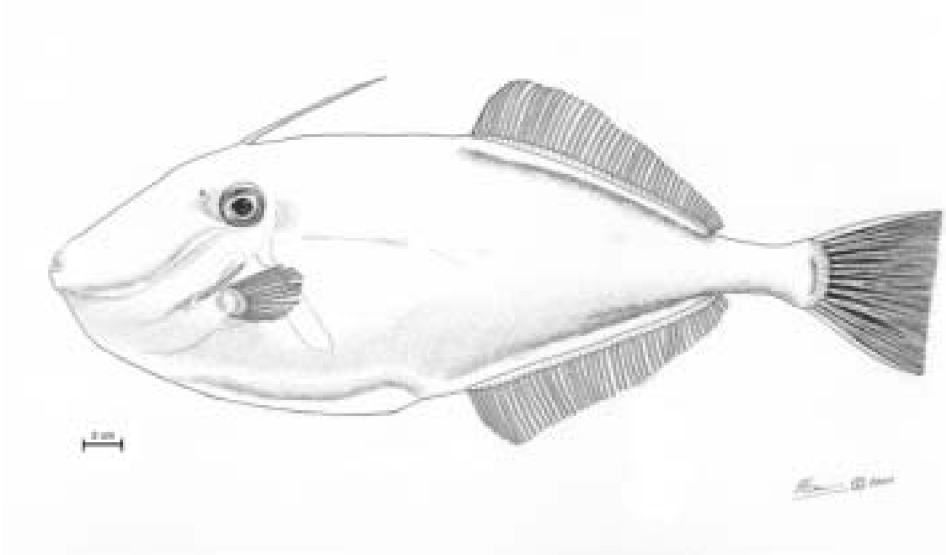

Fig. 2 - *Aluterus monoceros* (Linnaeus, 1758). MMF 26618, SL. 413 mm.

A. monoceros has been recorded from both sides of the Atlantic Ocean. It occurs from Massachusetts to Argentina (FIGUEIREDO & MENEZES, 2000), in the west coast of tropical Africa (HARMELIN-VIVIEN & QUÉRO, 1990) and South Africa (PENRITH, 1976). It was recorded for the first time from the northeast Atlantic (Bay of Biscay) by QUÉRO & LABORDE (1996) and from Cadiz by GALEOTE *et al*. (1996). It occurs also in the Azores (SANTOS *et al*., 1997) and in the Canary Islands (BRITO, 1991). The present record represents the first occurrence of this species in the archipelago of Madeira, giving the impression that, although rare, it is present throughout the central and northern eastern Atlantic Ocean.

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B O C A G I A N A

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NOTES ON TWO MADEIRA PLANTS

By N. C. H. Krauss [1]

The composite plant «Abundância» (*Eupatorium adenophorum* Spreng.) has been known in Madeira for many years. On July 24, 1962 I collected a second species of *Eupatorium*, *E. riparium* Schultz-Bip., confirmed by the Royal Botanic Garden, Kew, England. This was growing in association with *E. adenophorum* in a damp area along a path near Monte. Both these species of *Eupatorium* are native to Mexico. I have seen *E. riparium* growing along a small stream in a ravine at the Desierto de los Leones, Distrito Federal, in the hills above Mexico City. Both species are pests in grazing land in Hawaii.

On November 7, 1960 I collected specimens of *Ulex minor* Roth (determined by Royal Botanic Garden, Kew) in the grassy hills above Ribeiro Frio. Since then I have seen it also at Encumeada and Santo da Serra. *Ulex europaeus* L. has been known in Madeira for a long time, but I have not seen any records of *U. minor*.

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